

Another Successful Insect identification Workshop!

Alan Samel

We had our annual Insect Identification Workshop January 25, 2020 at the Haverford Reserve. The environmental lab is a great place for us to set up and take a look at the samples we took from stream the past year on April 6, 2019. We also had lunch supplied by DCVA, too! Beautiful!! Many thanks to the folks who came out and made the Workshop a success. You broke the record for the number of participants: almost 30 people!

The annual Stream Watch was April 6. We took 12 samples, 2 from each site. Thanks to the small army of volunteers who helped make this a great day. It was a beautiful day to get wet! It was sunny and about 60°F. Samples were taken from six locations on Darby Creek: Bartram Park in Darby, Darby Creek Road in Havertown (downstream from the Haverford Reserve), Skunk Hollow in Radnor, the Brandywine Preserve at Waterloo Mills in Easttown, the Swedish Cabin in Upper Darby, and a new site we call the pumping Station site in Radnor. Expanding to a sixth site is a great tribute to the expanding interest in the stream watch program and recognition of its importance to monitor the health of Darby Creek.

The insects and bugs we collect provide a snapshot of the health of Darby Creek. We have been conducting these sample collections and identifications for almost 20 years. From this long-term sampling, a trend of the stream health at each site has been determined. Each year we compare our findings from the water quality determinations from the previous years. It's a way of getting the big picture from a lot of very small bugs! But getting into the stream and collecting the bugs is only part of the streamwatch program.

The next step was to identify the bugs pulled from the stream. We then identify the level of water quality for that section of the creek. The purpose of the workshop is to identify the aquatic organisms taken in samples during the Stream Watch. The results provide an assessment of the water quality of Darby Creek at each site during that period of time will be assessed based on the organisms present during sampling. The 2019 samples showed decreases in water quality at all locations. While one year does not point to a problem, we will monitor this closely. The next stream watch is scheduled for this coming April 15th.

This insect identification workshop is not anywhere near as hard as it sounds. Yes, we use microscopes. Yes, the bugs are small. And yes, there is mud and twigs and leaves. But NO, it is not difficult. Heck, this year we had kids process samples collected! So much energy; it was great. And they did a great job. This was about the 15th year for this workshop, so we have gotten pretty good at it.

This past year, the results were very variable. One year does not provide an unequivocal conclusion about the water quality at each of our sites. It takes years of data before we

can get an idea of the overall water quality at any one site. With about 15 years data at some of the sites, we have a pretty good idea of what to expect, and what would surprise us. For example, the Havertown site just downstream from the Haverford Reserve trends over time to be in the fair-good range for water quality; this year is no different. At the other end, the Skunk Hollow water quality is almost always very good. This year that water quality metric went down to fair. Why? It was a warm winter, so that could be it. Or, was it something else? We really won't know until we sample that site again to see if there is a continued trend down or if it was just a one year blip.

Unfortunately, we were not able to conduct our annual stream watch for 2020 due to the Covid 19 virus. The stream watch event is very time sensitive and must occur in the early spring before the aquatic insects emerge as adults. We need these insects because they tell us a lot about the water quality at that site at that time. If we collect mayflies, which are very sensitive to stress, then that is the indication of a stream location with high water quality. If we collect no mayflies at a location but expect them to be there, then that is an indication that this site might be stressed.

It is unfortunate to lose an entire year, but I know that I can depend on this army of volunteers to be ready to go in 2021. In the meantime, stay healthy, protect our waters and watershed!

Alan Samel